



Impact of Co-firing Straw for Power Generation to Air Quality: A Case Study in Two Coal Power Plants in Vietnam

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Open field burning of rice straw regularly contributes to severe air quality issues affecting millions of inhabitants in the city of Ha Noi. We examine how much replacing open field burning by co-firing mitigates local air pollutants and greenhouse gases emissions. We select two coal power plants located in the North of Vietnam as specific examples. Our findings show that co-firing straw in these plants at 5% mixing ratio on heat basis can reduce greenhouse gas emission as well as air pollutant emissions (SO₂, PM₁₀ and NO_x) from 3% up to 13%. We examined the social value of these emission reductions using external costs factors. The health benefits of improving air quality by disposing of straw at a large coal power plant instead of open field burning are over ten million USD per year. This is the same order of magnitude as the technical costs of co-firing. Greenhouse gas emissions reduction benefits appear smaller.

